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THE USE OF ERTS/LANDSAT IMAGERY IN RELATION TO
AIRBORNE REMOTE SENSING FOR TERRAIN ANALYSIS
IN WESTERN QUEENSLAND, AUSTRALIA

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Report for period to 31st October 1975

by

Monica M Cole, BSc, PhD (Lond.), FRCGS

and

E. S. Owen-Jones, BSc, PhD (Wales), M.Inst.P

JAN 23 1976

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Receipt and handling of data to 31st October 1975

The following frames have been received:-

ID nos:-

2039-23555	Cloncurry - Mt. Isa area (March Imagery)
2041-00013	Gregory R. - Mt. Isa area (")
2039-23562	Cloncurry - Duchess area (")
2041-00020	Mt. Isa - Urundangi area (")
2038-23503	Julia Ck. - Mickinlay area (")
2059-00012	Gregory R. - Mt. Isa area (May Imagery)
2128-23501	Julia Creek area (")

Plates for the interpretation of this imagery have been prepared
but owing to involvement with field work in Australia for the acquisition
of ground truth data only a limited amount of interpretation of the
data was effected by 31st October 1975.

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(E76-10086) THE USE OF ERTS/LANDSAT IMAGERY
IN RELATION TO AIRBORNE REMOTE SENSING FOR
TERRAIN ANALYSIS IN WESTERN QUEENSLAND,
AUSTRALIA Quarterly Report, period ending
31 Oct. 1975 (Department of Industry) 3 p
N76-16509
HC 43.80
Unclas
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G3/43

Comment on the quality of the imagery

Apart from a noise band on three of the four bands of ID no. 2039-23555, the imagery is of good quality. Using the additive viewing system, on a quick look basis differences have been observed in the imagery taken at different seasons from LANDSAT 1 and LANDSAT 2. Precise interpretation will follow from the interpretation currently in progress.

Progress on the interpretation of the imagery

Ground truth information was obtained during the period April - September 1975, using existing interpretations of LANDSAT 1 imagery. The LANDSAT 2 imagery was not received in time for the field season.

Using the additive viewing system one colour composite transparency has been generated from the first LANDSAT 2 images for the following frames:-

ID no. 2039-23555 (Cloncurry - Dobbryn area)

Utilizing the above colour composite transparency part of the frame of the area of interest has been digitized by means of a microdensitometer. A supervised learning method, the maximum likelihood decision rule, has then been used to classify the image in an optimum manner. The next phase is to compare the results from this image with those from an image of the same area taken by

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LANDSAT 1 some two years earlier, for evidence of changes. Progress has also been made in reading a CCT which we have obtained of South-East England displaying a selected portion of the image in a microfilm plotter both on a grey-scale and as a density-sliced image of a single wave-band. Since the above LANDSAT 2 image is satisfactory, application has been made for a CCT of the frame ID 2039-23555 of the Cloncurry - Dobbryn area of Western Queensland.

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